

In the Claims:

1. (Previously presented) A continuous-time filter system comprising:

a master control unit and a slave unit with at least one slave filter, the master control unit including

an integrator having a transconductor and a capacitor which match those elements of the slave filter that define a time constant of the slave filter,

a voltage comparator connected to a variable threshold voltage and to an output of the integrator, the voltage comparator providing an output frequency signal, and

a phase frequency comparator providing a control signal as an output signal, the phase frequency comparator receiving said output frequency signal and a reference frequency signal as input signals; and

the slave unit including said at least one slave filter that uses the control signal to influence the slave filter's time constant and therein facilitate calibration of a transfer function of the slave filter.

2. (Previously presented) The system of claim 1, wherein the slave filter is an RC-filter and the control signal is a discrete signal leading to a calibration of the slave filter's transfer function in steps.

3. (Previously presented) The system of claim 1, wherein the slave filter is a continuous-time Gm-C-filter and the control signal is a continuous signal.

4. (Previously presented) The system of claim 1, wherein the slave filter is an integrated filter.

5. (Previously presented) The system of claim 1, wherein the master control unit comprises one transconductor and one capacitor only.

6. (Previously presented) The system of one claim 1, wherein the phase frequency comparator comprises:

- a loop filter providing the control signal as output signal,
- a phase frequency detector situated in front of the loop filter, the phase frequency detector receiving said output frequency signal and a reference frequency signal as input signals, and
- an error signal representing the phase difference between the output frequency signal and the reference frequency signal being fed by the phase frequency detector to the loop filter.

7. (Previously presented) The system of claim 1, wherein the master control unit comprises a switch being controllable by a signal.

8. (Canceled)

9. (Previously presented) The system of claim 1, wherein a DC voltage is applied to an input of the integrator.

10. (Previously presented) The system of claim 1, wherein the integrator has a transconductance that can be tuned by varying

- a threshold voltage being applied to an input of the voltage comparator, and/or
- a DC voltage being applied to an input of the integrator, and/or
- the frequency of a clock signal.

11. (Canceled)

12. (Previously presented) The system of claim 1, wherein the integrator has a transconductance that can be tuned by varying a DC voltage being applied to an input of the integrator while keeping a threshold voltage being applied to an input of the voltage comparator and the reference frequency signal unchanged.

13. (Previously presented) The system of claim 1, wherein the integrator has a transconductance that can be tuned by varying a threshold voltage being applied to an input of the voltage comparator while keeping a DC voltage being applied to an input of the integrator and the reference frequency signal unchanged.

14. (Previously presented) The system of claim 1, wherein the transconductor comprises a voltage-to-current converter that includes a programmable resistor array or a programmable capacitor array.

15. (Previously presented) The system of claim 1, further embodied in a telecommunication system, video-signal processing system, or disk driver system.

16. (Previously presented) A continuous-time filter system comprising:
a master control unit a slave unit with a least one slave filter,
the master control unit including
an integrator having a transconductor and a capacitor that match those elements of the slave filter that define a time constant of the slave filter,
a voltage comparator connected to a variable threshold voltage and to an output of the integrator, the voltage comparator providing an output frequency signal, and
a phase frequency comparator providing a control signal as an output signal, the phase frequency comparator receiving said output frequency signal and a reference frequency signal as input signals; and
the slave unit including said at least one slave filter that uses the control signal to influence the slave filter's time constant and therein facilitate calibration of a transfer function of the slave filter,
wherein the master control unit includes a switch being controllable by a signal (V_s), and wherein a logic circuit is used to provide the signal and the reference frequency signal from a clock signal.

17. (Previously presented) A continuous-time filter system comprising:

a master control unit a slave unit with a least one slave filter,
the master control unit including

an integrator having a transconductor and a capacitor that match those
elements of the slave filter that define a time constant of the slave filter,

a voltage comparator connected to a variable threshold voltage and to an
output of the integrator, the voltage comparator providing an output frequency
signal, and

a phase frequency comparator providing a control signal as an output
signal, the phase frequency comparator receiving said output frequency signal and
a reference frequency signal as input signals; and

the slave unit including said at least one slave filter that uses the control
signal to influence the slave filter's time constant and therein facilitate calibration
of a transfer function of the slave filter,

wherein the integrator has a transconductance that can be tuned by varying an
input clock frequency of a clock signal while keeping a threshold voltage being applied to
an input of the voltage comparator and a DC voltage being applied to an input of the
integrator unchanged.